

ABSTRACT

The invention provides a bidirectional power converter, that can be connected directly to an AC system  
5 without interposing a transformer, that is small in size, light in weight, inexpensive to manufacture, and capable of regenerative operation, and also provides a motor drive equipped with such a power converter and a BTB system and a grid-linking inverter system each comprising  
10 such a power converter. The power converter comprises converter cells each comprising: a first AC/DC converter which performs bidirectional power conversion between single-phase AC power and DC power; a second AC/DC converter whose DC side is connected to the DC side of  
15 the first AC/DC converter, and which performs bidirectional power conversion between single-phase AC power and DC power; a third AC/DC converter which performs bidirectional power conversion between single-phase AC power and DC power; and a high-frequency  
20 transformer which is connected between the AC side of the second AC/DC converter and the AC side of the third AC/DC converter. If the power converter 1 is an AC-input/AC-output type, the power converter further comprises a fourth AC/DC converter which is connected to the DC side  
25 of the third AC/DC converter, and which performs bidirectional power conversion between single-phase AC power and DC power.